

Specification Amendments

Please amend the paragraph beginning at page 6 line 20, as follows:

a1 The matching network 26 consists of a quarter-wavelength long section of transmission strip. The one quarter-wavelength distance is determined in relation to the center of a selected frequency band. In one embodiment, this strip line couples the center conductor of the source connector coaxial line 28, which has an impedance of 50 ohms, to the ~~helical antenna~~ helix 24, which has an impedance of 150 ohms. The matching network can function over the operating frequency band 2400 to 2500 MHz (2.4-2.5 GHz). This frequency is significant because it falls in an unlicensed frequency band that is restricted to low power transmissions. Using the correct impedance matching assists a low power transmission because otherwise the transmitted signal strength is affected when power is lost. The length of a matching network will vary based on the frequency being transmitted. This antenna can transmit frequencies outside the band discussed here and the matching network can be sized accordingly.

Please amend the paragraph beginning at page 10 line 4, as follows:

a2 FIGS. 7 and 8 illustrate a more detailed side and top view of the impedance matching network. The crescent shaped matching network 104 in FIG. 7 has hole or connection point 102 for the input line. The matching network can start out at 14 millimeters or roughly one radius of the helix and then taper down to the size of the wire used in the helical antenna. As mentioned the matching network is preferably made of copper and is mounted on a printed circuit board or plastic base 106 that includes an opposing conductive surface. FIG. 8 illustrates the impedance

matching network from the side view and further includes the signal input connector 108. It will be apparent from FIG. 8 that the input connector 108 electrically interconnects the shielding of the input coaxial line to the conductive base plate, so as to provide the conditions for impedance matching. It is the electromagnetic interaction of the matching network and the base plate that matches the impedance. The base plate thus forms an extension of the shielding of the input line.

Ad
ant. The base plate also serves as a back plane or reflector that helps form the desired electromagnetic waveform broadcast by the antenna.
